United States Court of Appeals

for the Second Circuit

PETITIONER'S BRIEF

77-4157

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No. 77-4157

United States Court of Appeals

For the Second Circuit

NATURAL RESOURCES DEFENSE COUNCIL, INC.,
Petitioner,

vs.

UNITED STATES NUCLEAR REGULATORY COMMISSION and UNITED STATES OF AMERICA,
Respondents.

Petition for Review of an
Order of the Nuclear Regulatory Commission

BRIEF FOR PETITIONER

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I. PRELIMINARY STATEMENT

The radioactive wastes which are the subject of this petition are generated by nuclear power reactors and are among the most toxic substances known to man. Their release into the environment could produce death, cancer or genetic mutations in catastrophic proportions. Unlike other toxic substances, however, these wastes remain dangerous for hundreds of thousands of years. They must, therefore, be isolated from the biosphere virtually in perpetuity. To date, the federal government has failed to develop any proven means for disposing of radioactive wastes safely, and substantial doubts exist about whether safe disposal will ever be technically or politically feasible.

In these circumstances, it would be foolhardy to continue to license nuclear power reactors without any regard for whether safe waste disposal can be accomplished. Yet, the agency vested with this licensing responsibility, the Nuclear Regulatory Commission, contends that the Atomic Energy Act allows it to do just that. On this basis, it denied the request for rulemaking filed by petitioner.

The Atomic Energy Act establishes a comprehensive scheme for the strict regulation of the use and production of nuclear materials. The Act broadly precludes the issuance of any nuclear power reactor licenses when inimical to the public health and safety. The safety review undertaken by the Commission in licensing proceedings in fact encompasses the full range of risks and hazards posed by the operation of

power reactors, with the important exception of waste disposal safety.

It is simply inconceivable that Congress could have intended that the potentially greatest threat to public health and safety -- the disposal of radioactive wastes generated by these reactors -- be exempted from this broad safety mandate. There is nothing in the language of the statute or its legislative history that supports this extraordinary exception.

In the landmark case of Scenic Hudson Preservation Conference v. F.P.C., 354 F.2d 608, 620 (2d Cir. 1965), cert. denied, 407 U.S. 926 (1972), this Court underscored the affirmative obligation of agencies to enforce their environmental and safety mandates broadly and the special responsibility of the courts to secure this commitment:

> "In this case, as in many others, the Commission has claimed to be the representative of the public interest. This role does not permit it to act as an umpire blandly calling balls and strikes for adversaries appearing before it; the right of the public must receive active and affirmative protection at the hands of the Commission.
>
> The Court cannot and should not attempt to substitute its judgment for that of the Commission. But we must decide whether the Commission has correctly discharged its duties -- including the proper fulfillment of its planning function in deciding that the 'licensing of the project would be in the overall public interest.'"

Ultimately, in its decision the Nuclear Regulatory Commission itself conceded some responsibility to continue reactor licensing only so long as it has reasonable confidence that radioactive wastes can be disposed of safely when necessary. Indeed, the Commission asserted that it makes an "implicit finding" in reactor licensing proceedings that safe waste disposal is reasonab v assured.

However, mere assurance by the Commission that it is performing this important safety review function provides no basis for scrutiny of its performance by the scientific community or interested public or any judicial review. In every other respect, the Atomic Energy Act, the Commission's own regulations, and established principles of administrative law require that the Commission's disposition of all material issues in reactor licensing proceedings be disclosed and fully explained in a statement of findings or reasons. Again, no basis exists for an exception for what may be the most material issue -- the handling of the radioactive wastes generated by these reactors. If the Commission's refusal to make an express, definitive safety finding is allowed to stand, it will escape public accountability and subvert the orderly process by which reviewing courts have ensured that agencies are fulfilling their s atutory mandate.

II. ISSUES PRESENTED

Since the Atomic Energy Act requires the Nuclear Regulatory Commission to refrain from issuing operating licenses for nuclear power reactors when inimical to public health and safety, can the Commission issue such licenses without first determining whether the highly toxic radioactive wastes that will inevitably be generated by these facilities can be disposed of safely?

When the Atomic Energy Act, the regulations of the Nuclear Regulatory Commission, and other authorities require an express, definitive finding of safety on all issues material to the licensing of the operation of a power reactor, can the Commission refuse to make any such finding as to whether the radioactive wastes that will inevitably be generated by nuclear reactors can be disposed of safely?

III. PROCEEDINGS BELOW

This action concerns an order issued by the Nuclear Regulatory Commission (NRC) on June 27, 1977.[1/] Record[2/] at 506; Appendix at 220. That order, referred to herein as "the NRC Decision," denied a petition for rulemaking submitted by the Natural Resources Defense Council on November 8, 1976.[3/] Record at 2; Appendix at 7. The NRC thereby refused to make an express determination, prior to issuance of power reactor operating licenses, whether high-level radioactive wastes generated by those reactors can be disposed of without undue risk to the public health and safety.

In its decision, the NRC advances primarily two grounds for declining to make the requested safety determination: (1) that its statutory responsibility in licensing nuclear reactors is limited to an express determination that activities at the reactor site itself will be conducted safely and this safety review does not extend to the permanent disposal which will be carried out when the radioactive wastes are shipped away

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1/ 42 Fed. Reg. 34391 (July 5, 1977). The NRC Decision is also attached as Exhibit A to the petition for review filed with this Court August 25, 1977.

2/ The Certified Index of the Administrative Record underlying this petition for review was prepared by the Nuclear Regulatory Commission and was filed with this Court on September 23, 1977. All references to the Record in this proceeding refer to the docket page numbers in that certified index.

3/ 42 Fed. Reg. 2730 (January 13, 1977).

from the reactor premises, and (2) that "reasonable confidence" exists that permanent waste disposal can be accomplished when it is likely to become necessary. Record at 508, 519; NRC Decision at 3, 14; Appendix at 222, 233.

This petition for review was filed on August 25, 1977, and jurisdiction herein is based on 28 U.S.C. §§ 2341 et seq. (1966). Petitioner NRDC alleges that the NRC's refusal to consider explicitly the safety of off-site permanent radioactive waste disposal prior to issuing a reactor operating license violates its statutory obligations under the Atomic Energy Act of 1954 ("AEA"), 42 U.S.C. §§ 2011 et seq., as amended by the Energy Reorganization Act of 1974 ("ERA"), 42 U.S.C. §§ 5801 et seq.

IV. STATEMENT OF THE CASE

A. The Radioactive Wastes: Their Toxicity and Magnitude

The radioactive wastes which are the subject of this petition are produced by commercial nuclear power plants. These plants generate electricity through the fissioning of uranium and plutonium atoms in the core of the nuclear reactors. This fission process ("splitting of the atom") produces heat which converts water into the steam which in turn powers electric generators. The fission process inevitably also creates massive amounts of highly toxic radionuclides that have no economic use; and other materials are subsequently

contaminated by these radionuclides during various stages of handling.[4/]

These radioactive wastes are highly toxic substances, and their disposal perhaps represents the most difficult problem of the nuclear era. Human exposure to radiation from such wastes can produce immediate death, life-shortening cancer, or serious genetic defects affecting future generations. Record at 167; Appendix at 45. Moreover, these radioactive wastes are extremely long-lived. Many remain potentially lethal for hundreds of thousands of years. Record at 794. In consequence of their extraordinary toxicity and longevity, radioactive wastes will require isolation from the biosphere for periods of time unparalleled in human history. Record at 4514; Appendix at 294.

For example, plutonium-239 is one of the most abundant

[4/] The specific wastes under consideration in this suit include "spent fuel," "high-level waste" and "transuranic wastes." Spent fuel is comprised of irradiated fuel rods which are withdrawn from nuclear reactor cores as the fissionable isotopes are depleted. Until recently, the federal government and the nuclear power industry were planning on chemically treating, or "reprocessing," spent fuel in order to remove the unfissioned isotopes of plutonium and uranium for use in fresh fuel. However, in April 1977, President Carter announced that reprocessing would be deferred indefinitely. Executive Office of the President, Energy Policy and Planning, The National Energy Plan at XX (April 29, 1977). Under this new policy, spent fuel may become the final form of waste for ultimate disposal. If reprocessing does occur, then waste products defined as "high-level wastes" are produced. See 10 C.F.R. Part 50, Appendix F (1970). Transuranic wastes (so-called because atomic numbers of the radionuclides are higher than uranium) are materials such as clothing, glass and metal that become contaminated with transuranic radionuclides that are created as by-products of the fission process.

and dangerous of the radionuclides generated by commercial nuclear reactors. It is so toxic that as little as three micrograms -- a "speck" -- can cause lung cancer in animals.[5/] Moreover, its exceedingly long half-life (decay period) of 24,000 years means that it will remain potentially harmful for at least many tens of thousands of years. Accordingly, plutonium-239, like some of the other radioactive wastes which are the subject of this lawsuit, must be isolated from the environment essentially in perpetuity.

When measured by amount of radioactivity (as an indicator of potential hazard), significant quantities of commercial radioactive wastes have been generated already, and the waste inventories are growing rapidly. Record at 4514; Appendix at 294. At present, about 65 commercial nuclear reactors are operating within this country,[6/] and by the year 2000, the NRC projects that over 500 such reactors may be operating. Record at 1298. Thus, when measured by radioactivity, the current inventory of radioactive wastes in temporary storage is expected to double within three or four years; and the inventory produced by commercial reactors by the end of the century will be 20 times greater than that currently on hand. Record at 953.

[5/] J. Baer and R. Thompson, "Plutonium: Biomedical Research," Science 183, at 720 (February 22, 1974).

[6/] Energy Research and Development Administration, Status of Nuclear Power Plants (September 30, 1977).

B. The Federal Government's Abortive Efforts To Find A Satisfactory Method Of Waste Disposal

The clear nexus between continued reactor operations, waste generation and waste disposal has received attention by a number of experts in the nuclear field. For example, last year the United Kingdom's Royal Commission on Environmental Pollution called for a solution to the waste disposal problem prior to the continued generation of such wastes:

> "...[t]here shall be no commitment to a large program of nuclear fission power until it has been demonstrated beyond reasonable doubt that a method exists to ensure the safe containment of long-lived, highly radioactive wastes for an indefinite future." 7/

The United States General Accounting Office has also noted that a solution to the waste disposal problem is critical to the expansion of the nuclear industry:

> "The unsolved problem of radioactive waste disposal threatens the future of nuclear power in the United States. Nuclear critics, the public, business leaders, and Government officials concur that a solution to the disposal problem is critical to the continued growth of the nuclear energy." 8/

7/ Sixth Report, Nuclear Power and the Environment 131 (September 1976).

8/ General Accounting Office, Report to the Congress, Nuclear Energy Dilemma: Disposing of Hazardous Radioactive Wastes Safely, cover page (September 9, 1977) (hereinafter "GAO Waste Disposal Report").

To the same effect is a recent report by the House Committee on Government Operations:

> "It is incumbent upon the Federal decisionmakers, whoever they may be, to carefully weigh the costs and dangers relative to the back end of the fuel cycle before blindly forging ahead, even for a moment and for whatever distance.
>
> The time for that evaluation is now. The Nation cannot wait any longer." 9/

In the past, however, the impetus for resolution of the waste disposal problem has been lacking precisely because reactor licensing and the development of a waste disposal facility have proceeded in isolation of each other. Because the continued licensing of reactors was not conditioned on the speedy development of safe waste disposal, the government has lacked adequate incentive, and consequently its waste disposal program has been beset by a host of delays, missteps and changes in direction. Although the search for waste disposal technology began shortly after the passage of the AEA, the NRC itself admits that up to about 1970, whatever waste management policy existed "had been more or less ad hoc." Record at 801.

9/ H.R. Rep. No. 95-755, 95th Cong., 1st Sess. 2 (1977).

At the outset, the Atomic Energy Commission (AEC)[10] and its advisors focused on bedded salt deposits as the most likely geological formation for disposal of the long-lived wastes. Record at 800. Then, in the 1960's, the AEC de-emphasized the goal of achieving federally regulated, deep geologic disposal. Instead, it proposed to delegate responsibility to industry under a plan that contemplated indefinite storage of reprocessed high-level wastes in liquid form in near-surface storage tanks and the repeated transfer of these wastes to new tanks as the old storage tanks wore out. Record at 4550, 4552.

This program, instituted at a storage facility near West Valley, New York, was marked from the beginning by inadequate study and unforeseen safety problems. Although the liquid wastes at West Valley were placed in storage tanks, no plan was established in advance to ensure that the wastes could be safely removed from the tanks when it came time to transfer them. Then, in 1970, the problem at West Valley was

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[10] Pursuant to Section 104 of the Energy Reorganization Act (ERA) (42 U.S.C. § 5814), the Atomic Energy Commission was abolished and its functions split between the Energy Research and Development Administration (ERDA) and the NRC (42 U.S.C. §§ 5811 and 5841). ERDA was given responsibility for research and development programs related to nuclear activities. 42 U.S.C. § 5813. The NRC was given licensing responsibility over nuclear activities, including licensing of nuclear reactors (42 U.S.C. § 5843) and waste disposal facilities (42 U.S.C. § 5842). Pursuant to Section 202 of the Department of Energy Organization Act, Pub. L. No. 95-91 (1977), ERDA's nuclear waste management development and research functions were transferred to the Department of Energy.

compounded when the AEC promulgated new regulations requiring all high-level wastes generated in the future to be solidified within five years of their generation. This new policy also stated that a specific proceeding on the future of West Valley wastes would be initiated. 10 C.F.R. Part 50, Appendix F (1970). Seven years later no such proceeding has started. Even worse, no satisfactory, safe removal method has been developed, and additional special research must now be conducted to rectify past errors in decisionmaking. Record at 4555.

The cost of rectifying the waste disposal problem at West Valley may be more than five hundred million dollars. Record at 4560. Although the State of New York is ultimately responsible for managing the radioactive wastes at West Valley, the state indicated that it is unable to resolve the technical and economic issues for an adequate waste clean-up operation.[11/] In sum, the West Valley disposal experiment has been a radioactive waste nightmare from the 1960's to the present.

In the late 1960's, the government renewed its emphasis on the development of a deep geologic repository, and the AEC finally selected an abandoned salt mine near Lyons, Kansas, as the location for a pilot repository. Record at 801. However, later investigation disclosed that water from adjacent mining operations might seep into the repository and dissolve the salt.

11/ General Accounting Office, Report to the Conservation, Energy, and Natural Resources Subcommittee, House Committee on Government Operations, Issues Relating to the Closing of the Nuclear Fuel Services, Incorporated, Reprocessing Plant at West Valley, New York, 6 (March 8, 1977).

In early 1972, the Lyons, Kansas project was abandoned. Record at 801.

Next, in May 1972, the AEC announced its plan to build a so-called "retrievable surface storage facility" or "RSSF" -- an engineered facility constructed near the surface of the earth -- to store the wastes for an indeterminate period of time, while the prolonged search for an acceptable, safe geological site continued. Record at 801. Three years later, however, the waste program changed direction once again. In the spring of 1975, the Energy Research and Development Administration (ERDA) withdrew the request for budgetary funding for the RSSF, although the RSSF was purportedly retained as a back-up system in case "other repository plans failed." Record at 802.

With a resurrected emphasis on the development of a deep geologic repository, ERDA expanded its efforts to locate a potential geologic formation, and in 1976 focused ultimately on a salt formation in the state of Michigan. However, in June 1977, after residents of northern Michigan had voted overwhelmingly to prohibit the siting of a waste repository within their state, the federal government abandoned its efforts to locate the commercial waste repository in the state of Michigan.[12/]

The government must now begin anew the search for potential salt or other geological formations that can serve as a permanent disposal facility. However, in addition to the unresolved technical problems, serious political and social resistance to the development of a geologic repository is

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12/ GAO Waste Disposal Report, supra n. 8, 15.

mounting throughout the country. For example, ten states already have introduced bills banning high-level waste disposal repositories within their borders. Record at 4524; Appendix at 303. Against this backdrop of past missteps, abandoned programs and mounting political opposition, there is no guarantee that the federal government can or will ever develop a safe, permanent waste disposal facility.

C. The NRC Decision

The NRC Decision herein does not deal with this history of radioactive waste mismanagement at all. Indeed, after ruling that it was not required by the AEA to make the definitive safety finding requested and after denying the petition for rulemaking, the NRC purported to find "reasonable confidence" that radioactive wastes can and will be disposed of safely in due course. Record at 519; NRC Decision at 14; Appendix at 233. Nowhere, however, does the NRC Decision state definitively that the wastes can in fact be disposed of safely. The Decision fails to demonstrate that the NRC conducted any special analysis of this question. Instead, it relied, largely without further explanation, on the existence of four other government studies, as a basis for this conclusion.

The documents in question were a report by ERDA describing the technology for managing high-level waste, ERDA's unreleased programmatic EIS on its proposed waste management program, the NRC Staff's analysis of the environmental effects of radioactive waste disposal, and the generic EIS on plutonium

recycle. However, by their own characterization, none of these documents was ever intended as a safety assessment of radioactive waste disposal.[13/] The NRC Decision merely refers to these documents, without an explanation of how they support the Commission's asserted "reasonable confidence" that wastes can be disposed of safely.

In similar fashion, reference is made to several ongoing studies by ERDA (now Department of Energy (DOE)) concerning waste disposal without any analysis of how their pendency could support this "reasonable confidence." Record at 519-520; NRC Decision at 14-15; Appendix at 233-234. Until these ongoing studies are completed and their conclusions are available for NRC review and analysis, they can scarcely support any definitive safety finding by the NRC. Indeed, even when completed, they will still reflect the conclusions of the DOE, the future applicant for a license for a waste disposal facility, and not the conclusions of the NRC, the agency charged with regulatory responsibility to protect public health and safety.

13/ For example, ERDA's document describing technology for high-level waste, in outlining the scope of its intended purpose, stated that it did not "address environmental impact issues ... estimate and compare costs, estimate and compare safety and risk." Record at 3081. Similarly, ERDA's programmatic EIS on waste management and the NRC's unpublished generic EIS on plutonium recycle are not safety assessments. Rather, these documents are environmental impact statements prepared to disclose the environmental impact of the programs under consideration and to perform cost/benefit analyses of the projects. See, e.g., Record at 1256. Similarly, the NRC has made it clear that its environmental surveys of radioactive waste disposal are documents of limited scope and were never intended as safety assessments. 42 Fed. Reg. 13804-13805 (March 14, 1977).

Finally, it should be noted that the NRC Decision not only omits any analysis of the past government failures to develop a safe means of radioactive waste disposal, but also omits any analysis of recent studies that cast substantial doubt on the ultimate feasibility of radioactive waste storage. At present, no approved plan for an ultimate disposal facility exists (Record at 4529; Appendix at 307), and the NRC itself has acknowledged that many uncertainties must be resolved before safe waste disposal is achieved:

> "Past work does not, however, fully cover the risk situations that should be explored. Representative studies have been done with varying degrees of depth and sophistication, but there are still uncertainties in areas such as the effect of waste presence on repository stability; the probabilities and consequences of intrusive acts by humans; the validity of data used in modeling studies; the design and regulatory actions needed to minimize possibilities of repository failure; projection of future societal habits and demography, and, finally, the relative importance of various potential initiating events." Record at 684.

More recently in an analysis of the waste disposal program prepared in conjunction with a review of NRDC's petition for rulemaking, the NRC staff reiterated its uncertainty that radioactive wastes will be disposed of safely:

> "The degree of confidence the Commission can have regarding whether or not the wastes <u>will</u> be disposed of safely is more limited. Regardless of the technical feasibility of

> disposal, selection of disposal sites will be highly controversial and there will almost certainly be a problem with public acceptance. In addition, the current interest in an interim storage concept for spent fuel and postponement of reprocessing and the breeder could result in a decreased sense of urgency in demonstrating a system for final disposal at the same time that quantities of waste nuclides are rapidly increasing." Record at 4534; Appendix at 312.

Other independent assessments have echoed these concerns. A recent government-sponsored report prepared at the Energy Laboratory of the Massachusetts Institute of Technology, has thrown doubts upon the ability of the government to devise an acceptably safe disposal plan and carry it out effectively. The draft report concluded:

> "The existing organization for radioactive waste management is unworkable if left unchanged."
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> * * * *
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> "The existing framework for radioactive waste regulation will be ineffective if left unchanged." Record at 156, 158; Appendix at 34, 36.14/

A recent report prepared by the Jet Propulsion Laboratory for the President's Office of Science and Technology Policy, reached a similar conclusion:

14/ The final version of the M.I.T. report modified these conclusions slightly, stating "[t]he existing organization for radioactive waste management is likely to be unworkable if left unchanged" and that "[t]he existing framework for waste regulation is likely to be ineffective if left unchanged." M. Willrich, Radioactive Waste Management and Regulation, Energy Laboratory Report No. MIT-EL 76-011, at 1-5, 1-6 (December 1976).

> "The results of this study indicate that the U.S. program for high-level waste management has significant gaps and inconsistencies. Areas of greatest concern include: the adequacy of the scientific data base for geological disposal; programs for the disposal of spent fuel rods; interagency coordination and uncertainties in NRC regulatory requirements for disposal of both commercial and military high-level waste."15/

The United States General Accounting Office concluded that the facts do not substantiate the NRC's strong optimism that safe waste disposal is assured:

> "After several decades of work, AEC did not, and ERDA has not yet (1) demonstrated acceptable solutions for long-term storage and/or disposal of its high level waste and (2) satisfied the scientific community that present storage sites are geologically suited for long term storage or disposal."
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> * * * *
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> "The Energy Research and Development Administration has begun a program to demonstrate by the mid-1980's the feasibility and safety of placing radioactive wastes in deep geological formation. GAO points out that not only has progress been negligible to date, but that future program goals are overly optimistic because the Energy Research and Development Administration faces many unsolved

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15/ T. English, An Analysis of the Back End of the Nuclear Fuel Cycle with Emphasis on High-Level Waste Management, Jet Propulsion Laboratory Publication 77-59, viii (August 12, 1977).

social, regulatory, and geological obstacles." 16/

At a minimum, significant doubt exists among the experts in the nuclear field whether the government's waste disposal "program" as currently mapped out can achieve its goal of safe waste disposal. Despite this substantial degree of uncertainty, the NRC refuses to make the logical link between reactor operations and waste disposal. By refusing to make an express determination in reactor licensing proceedings as to the safety of permanent waste disposal, the NRC continues to license the operation of nuclear reactors and to permit the inevitable generation of massive quantities of radioactive waste without sufficient assurance that the public health and safety will be protected.

16/ GAO Waste Disposal Report, supra n. 8, 50, and cover page.

V. ARGUMENT

A. The NRC's Present Regulatory Scheme, Which Excludes Radioactive Waste Disposal From The Explicit Safety Determination Made In Licensing Nuclear Reactors, Is Wholly Insufficient To Protect The Public From The Perils Of The Radioactive Wastes Which Will Inevitably Be Generated By Operating Reactors.

The permanent isolation of radioactive wastes from the biosphere represents one of the most serious and difficult technical problems faced by mankind. Ultimately, the responsibility for ensuring that the public health and safety is not imperiled by the generation of these wastes must reside with the agency which licenses the power reactors producing these wastes in the first place. The NRC in effect acknowledges some responsibility under the AEA to ensure that wastes can be disposed of safely before reactors are licensed, but it refuses to make an express "definitive safety finding" to this effect in reactor licensing proceedings. Petitioner submits that the AEA requires this definitive finding. The NRC's decision herein demonstrates a failure to assure protection of the public health and safety from the dangers of radioactive waste and an attempt to avoid public accountability for its default in the performance of this important responsibility.

It bears emphasis that the NRC's acceptance of responsibility to make this definitive safety finding would not in itself entail a moratorium on power plant licensing. The

NRC assumed that the finding requested by the petitioner is that facilities currently exist to dispose of radioactive waste safely. Record at 508; NRC Decision at 3; Appendix at 222. On the contrary, the petition requested only that the NRC determine whether reasonable assurance exists that radioactive wastes can be disposed of safely. What would constitute reasonable assurance and whether reasonable assurance exists are not issues which must be resolved by this Court, since the agency has not itself addressed these questions in the manner required by the AEA.

This "reasonable assurance" could be based on a definitive finding, at a minimum, (1) that the technology exists for safe permanent disposal, although it need not be in place now, (2) that the appropriate technology will be fully implemented, and (3) that reactor licenses are conditioned on the establishment of and compliance with appropriate deadlines for the development of safe waste disposal facilities.[17/] Of

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17/ The AEA and the NRC's own regulations authorize the imposition of such conditions upon reactor licenses. 42 U.S.C. §§ 2133(a), 2233, 2237; 10 C.F.R. §§ 55.30, 55.21 (1963). Indeed, the NRC has imposed conditions on currently issued reactor licenses, which provided that they could continue operation subject to the outcome of ongoing administrative proceedings assessing the environmental impacts of waste management and reprocessing. 41 Fed. Reg. 49898 (November 11, 1976). Issuance of conditional reactor licenses was also suggested in Citizens for Safe Power, Inc. v. N.R.C., 524 F.2d 1291, 1304 (D.C. Cir. 1975) (Bazelon, J., concurring) as a viable option for insuring public health and safety. Alternatively, the NRC could grant reactor licenses for terms shorter than the forty-year maximum period permitted by the AEA (42 U.S.C. § 2133(c)) in order to allow reassessment of whether continued reactor operation should be permitted if the deadline for a waste disposal facility was not met.

While it would be most efficient to make a waste disposal safety determination and consider these licensing options in a generic administrative proceeding rather than in each individual reactor licensing, (continued on next page)

course, if there is insufficient evidence to support any such reasonable assurance, then a moratorium on reactor licensing would be required not merely by the mandate of the AEA, but as an absolute necessity for protection of the public health and safety.

The NRC, however, refuses to make any such explicit link between the licensing of power reactors and the development of the means of disposing of the toxic wastes they generate. Rather, in reactor licensing proceedings its safety review is confined to the adequacy of interim storage of radioactive wastes at the reactor site. Record at 509, 518; NRC Decision at 4, 13; Appendix at 223,232.[18/] Yet, the radiological health and safety hazards and required containment and isolation are even more troublesome after shipment of the wastes away from the reactor site. Nevertheless, the NRC contends that explicit consideration of the safety of off-site, permanent waste disposal can

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17/ (continued from previous page) fashioning the precise format for this determination ultimately rests with the NRC. Natural Resources Defense Council v. N.R.C., 547 F.2d 633, 641 n. 17 (D.C.Cir. 1976), cert. granted sub nom. Vermont Yankee Nuclear Corp. v. Natural Resources Defense Council, 429 U.S. 1090 (1977); Ecology Action v. A.E.C., 492 F2d 998, 1002 (2d Cir. 1974). See also Note, "The Use of Generic Rulemaking to Resolve Environmental Issues in Nuclear Power Plant Licensing," 61 Va.L. Rev. 869, 878-79 (1975). The important matter for this Court to ensure is that a safety proceeding is held, and that the continued licensing of reactors is tied to the development of safe waste disposal.

18/ The NRC's regulations require each applicant to submit information concerning the production, on-site storage, on-site packaging and shipment off-site of radioactive wastes. 10 C.F.R. §§ 50.34(b)(2)(i)(1968); 50.34(b)(3)(1968); 50.34a(a)(1970); 50.34a(c)(1)(1970).

await its review of some later application for a license for the ultimate disposal facility, pursuant to Section 202 of the ERA, 42 U.S.C. § 5842.

The obvious gap in this scheme of regulatory review was forcefully described by the court in Natural Resources Defense Council v. N.R.C., 547 F.2d 633, 640 (D.C.Cir. 1976), cert. granted sub nom. Vermont Yankee Nuclear Corp. v. Natural Resources Defense Council, 429 U.S. 1090 (1977)(hereinafter "Vermont Yankee"):

> "Once a series of reactors is operating it is too late to consider whether the wastes they generate should have been produced, no matter how costly and impractical reprocessing and waste disposal turn out to be. All that remain are engineering details to make the best of the situation which has been created."

Accordingly, in Vermont Yankee, the court rejected the NRC's argument that consideration of the environmental effects of radioactive waste disposal could be deferred until application was made for the licensing of a waste disposal facility. It held that the National Environmental Policy Act of 1969 ("NEPA"), 42 U.S.C. §§ 4321 et seq., required this environmental assessment prior to the licensing of the reactors which will generate this waste.[19/]

19/ It is important to note that although the reasoning of the Vermont Yankee decision applies with equal force to the instant case, the substantive results achieved by applying that reasoning will be different. Vermont Yankee requires no more than a full disclosure of the environmental impacts, including the health effects, of waste disposal. (continued on next page)

For the same reasons, the NRC's determination of whether radioactive wastes can be disposed of safely, must be made prior to the licensing of power reactors. A comprehensive review at that juncture would secure the reasonable assurance that safe disposal is achievable, or failing that, would enable the agency to curtail or condition reactor operations and the concomitant generation of waste.

In contrast, deferral of this safety determination until an application may be made under Section 202 of the ERA, for a license for an ultimate radioactive waste disposal facility, provides no assurance that wastes can ever be disposed of and allows the generation of these wastes to continue indefinitely in the meantime. There is no guarantee that the Department of Energy will ever develop an acceptably safe waste disposal facility, and consequently no guarantee that NRC proceedings to license these facilities will ever be successfully completed.

Thus, by its nature, the NRC's safety review under Section 202 only ensures that no disposal facility will be licensed to receive wastes unless it is safe. It does not ensure that such a facility will in fact be developed. Nor does it ensure that the generation of radioactive wastes will

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19/ (continued from previous page) This information will then be factored into a cost-benefit analysis in individual reactor licensings. In contrast, as a predicate to reactor licensing, the instant case would require the agency to make a substantive determination that, irrespective of the benefits of nuclear power, the risks of generating that power are acceptable in terms of their impact on the public health and safety.

be curtailed if no safe waste disposal facility can be or is developed.

These questions are scarcely academic. At present, no permanent disposal facilities exist, and no specific site has been selected as a potential waste repository. Indeed, the federal government has encountered serious technological and political problems in locating a feasible l site. The hypothetical safety review under Section 2(the ERA is clearly inadequate, then, to protect the public health and safety. The only means by which that mandate can be satisfied is if the NRC makes a definitive safety finding for radioactive waste disposal in reactor licensing proceedings.

B. While The NRC Concedes It Has A Responsibility To Assess The Safety Of Radioactive Waste Disposal To Ensure Protection Of The Public Health And Safety, The NRC Attempts To Insulate Its Analysis Of The Waste Disposal Issue From Public and Judicial Review.

Ultimately the NRC itself acknowledges the link which exists between power reactor licensing and the provision of safe waste disposal. Indeed, throughout its decision, the NRC in effect concedes its basic statutory responsibility to protect public health and safety in this regard. It argues, for example, that no proof is required in reactor licensing proceedings that a permanent waste disposal exists, "so long as the Commission can be reasonably confident that permanent

disposal ... can be accomplished safely when it is likely to become necessary." Record at 508,509; NRC Decision at 3,4; (emphasis added), Appendix at 222-223. Elsewhere in the Decision, the Commission claims that it makes an "implicit finding" in reactor licensing proceedings that safe permanent disposal is reasonably assured:

> "The Commission would not continue to license reactors if it did not have reasonable confidence that the wastes can and will in due course be disposed of safely. The accumulating evidence as discussed below continues to support the Commission's implicit finding of reasonable assurance that methods of safe permanent disposal of high-level wastes can be available when they are needed." Record at 519; NRC Decision at 14. 20/

Despite its acknowledgement of the nexus between reactor licensing and waste disposal, the NRC argues that it is not required by law to deal with this issue explicitly in reactor licensing proceedings. Record at 508; NRC Decision at 3. It thus seeks to insulate itself from meaningful public scrutiny and judicial review in the performance of its responsibility to protect the public health and safety under the AEA.

The courts have insisted, however, that federal agencies make public a full statement of the reasons underlying

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20/ Even prior to the decision in the Vermont Yankee case, supra, the NRC regulations were revised to require that the effects of permanent radioactive waste disposal be considered in the analysis under the National Environmental Policy Act, 42 U.S.C. §§ 4321 et seq. (1969), in individual licensing proceedings. See 10 C.F.R. § 51.20(e)(1975).

their decisionmaking. As the court stated in Greater Boston Television Corp. v. F.C.C., 444 F.2d 841, 852 (D.C.Cir. 1970), cert. denied, 403 U.S. 923 (1971):

> "Reasoned decision promotes results in the public interest by requiring the agency to focus on the values served by its decision, and hence releasing the clutch of unconscious preference and irrelevant prejudice. It furthers the broad public interest of enabling the public to repose confidence in the process as well as the judgments of its decision-makers."

In Scientists' Institute for Public Information v. A.E.C., 481 F.2d 1079, 1098 (D.C.Cir. 1973), the court emphasized the particular necessity for public exposure of the AEC's determinations concerning nuclear safety:

> "It is obvious that government programs for development of technology do not proceed in callous disregard to the public welfare. It is equally obvious, however, that in the process of balancing benefits against risks, the government sponsors of technological programs are making decisions as to whether the public may be asked to assume certain risks or burdens which are determined to be 'reasonable' or not 'undue.' Since such determinations are presently made within small closed circles of experts who have a vested interest in the technology, the basic question is whether the public itself would be willing to assume these risks and burdens for the sake of obtaining the promised benefits." 21/

21/ Quoting Green, Technology Assessment and the Law: Introduction and Perspective, 36 Geo. Wash. L. Rev. 1033, 1040-41 (1968).

Agencies such as the NRC are charged with regulating areas on the frontiers of technological development, where the future risks to public health and safety are necessarily uncertain. To perform this vital function, decisions must be made which not only require a special understanding of extraordinarily complicated technical matters but also require delicate judgments of policy in determining whether the public safety is adequately protected in the face of these uncertainties. In these circumstances, the courts have recognized "a special judicial interest in favor of protection of the health and welfare of people." Ethyl Corp. v. E.P.A., 541 F.2d 1, 24 (D.C.Cir.), cert. denied, 426 U.S. 941 (1976). These kind of cases thus impose a fundamental responsibility upon courts to ensure that the agency's action satisfies its important statutory mandate. In discharing this responsibility, the courts have refrained from "second-guessing" the agencies but have required that their decisions be "reasoned" and fully disclosed.

> "[I]n cases of great technological complexity, the best way for courts to guard against unreasonable or erroneous administrative decisions is not for judges themselves to scrutinize the technical merits of each decision. Rather, it is to establish a decisionmaking process which assures a reasoned decision that can be held up to the scrutiny of the scientific community and the public." International Harvester Co. v. Ruckelshaus, 478 F.2d 615, 651-652 (D.C.Cir. 1973) (Bazelon, J., concurring).

For example, in Industrial Union Department, AFL-CIO v. Hodgson, 499 F.2d 467, 475-476 (D.C.Cir. 1974), the court recognized the unavoidable uncertainty in the scientific data underlying the agency's decision to regulate asbestos dust. For this reason, it emphasized the need for the agency to articulate carefully the reasons behind its decision, and it required the agency to identify both the specific facts and policy judgments upon which it relied.

In sum, when an agency has been entrusted with an important and difficult mandate to protect the public health and environment, it has a special responsibility to demonstrate that it has in fact taken "a hard look at its hard problems." Environmental Defense Fund, Inc. v. E.P.A., 465 F.2d 529, 541 (D.C.Cir. 1972). This requirement not only insures more meaningful public review but allows a reviewing court to determine "whether the decision was based on all of the relevant factors, and whether there has been a clear error in judgment." Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971).

In its decision herein, the NRC offers only bald assurances that it is performing its statutory responsibility to protect the public health and safety from the hazards of radioactive waste. It refuses to make the express definitive safety finding required by the AEA, and relies instead upon a supposed "implicit finding" that reasonable assurance of safe waste disposal exists.

This stance effectively conceals the NRC's decision-making from the "scrutiny of the scientific community and the public," which the courts have relied upon to guard against unreasonable or erroneous administrative decisions. It thus divests the court of any meaningful opportunity for judicial review of the agency's performance of its mandate to protect public health and safety.

The courts have specifically held that such "implicit findings" by the NRC will not satisfy this important responsibility under the AEA. For example, in Brooks v. A.E.C., 476 F.2d 924 (D.C.Cir. 1973), the court reviewed an AEC order denying a hearing on a construction permit amendment. The AEA provided that the AEC could dispense with a hearing if the amendment involved "no significant hazards consideration." The court held, however, that the AEC could not rely upon this exception unless it made an express finding to that effect in its order. It emphasized that the requirement of a statement of reasons for agency decisions was a "fundamental principle" of administrative law, "especially in cases such as this where the public interest demands close scrutiny of agency action." 476 F.2d at 926, 927. See also Nader v. N.R.C., 513 F.2d 1045, 1051 (D.C.Cir. 1975) ("It is equally well settled 'that an agency or commission must articulate with clarity and precision its findings and the reasons for its decisions,' . . . .").

In Joseph v. F.C.C., 404 F.2d 207, 211 (D.C.Cir. 1968), the court rejected similar arguments that the agency's

findings could be "implied" from its action:

> "The finding required by the statute was concededly not made in so many words. Commission counsel urges that the finding may be implied from the Commission's grant of the application on the presumption of regularity of an official action. When Congress requires a finding, its instruction is not to be ignored or given only lip service. The need for articulation of findings requires the decisionmaking body to focus on the value to be served by its decision and to express the considerations which must be the bases of decision."

See also, Burlington Trucklines, Inc. v. United States, 371 U.S. 156, 167 (1962); American Telephone & Telegraph Co. v. F.C.C., 449 F.2d 439, 451 (2d Cir. 1971); Office of Communications of United Church of Christ v. F.C.C., 359 F.2d 994, 1008 (D.C.Cir. 1966); Michigan Consolidated Gas Co. v. Panhandle Eastern Pipe Line Co., 226 F.2d 60, 67 (6th Cir. 1955).

Indeed, by its own regulations, the NRC is required to make explicit findings on all issues material to its ultimate conclusion that the licensing of a nuclear reactor will adequately protect the public health and safety. 10 C.F.R. §§ 2.700 et seq. Accordingly, the NRC's alleged "implicit finding" of reasonable confidence in the safety of waste disposal thus violates not only established principles of administrative law, as elaborated in the above cases, but also the NRC's own regulations.

Finally, it should be noted that the NRC's decision

denying the petition cannot itself suffice as the safety determination sought by the petition. In the first place, no formal rulemaking on the substantive issue of the safety of radioactive waste disposal was ever commenced by the Commission. Rather, the NRC requested comments as to whether to conduct the rulemaking requested by petitioner. 42 Fed. Reg. 2730 (January 13, 1977). After an assortment of comments were received, the NRC ruled that it was not required, as a matter of law, to make the safety determination requested. Record at 508; NRC Decision at 3. In so doing, the NRC focused the comments on the legal question of whether it was required to make such a safety finding rather than on the substantive issue of the safety of radioactive waste disposal that the petition sought to address.

Moreover, the conclusions in the NRC Decision concerning radioactive waste disposal are not related to any particular evidence, as described supra at pages 14 - 19. In Automatic Canteen Co. of America v. F.T.C., 346 U.S. 61, 81 (1953), the court stressed that effective judicial review of agency action would be stifled if the agency were allowed to hide behind "uncritical generalities or such looseness of expression" that it was impossible for the court to determine the basis for the agency's conclusions. Similarly, the Supreme Court has emphasized that "the grounds upon which the administrative agency acted be clearly disclosed and adequately sustained." S.E.C. v. Chenery Corp., 318 U.S. 80, 94 (1943). Therefore, even if the decision were intended to serve as an

express finding on the safety question (which it clearly was not) it would not meet these established requirements for the articulation of findings.

At bottom, the NRC asserts that the statute does not require the determination requested, as a matter of law. We believe that its argument is an effort to insulate itself from public scrutiny and judicial review of the performance of the important responsibilities which it otherwise concedes. We turn then to an examination of that legal question.

C. The Statutory Framework Of The Atomic Energy Act Requires That The NRC Determine Whether Radioactive Wastes Can Be Disposed Of Safely Prior To Reactor Licensing.

The AEA, as amended by the ERA, establishes a comprehensive scheme for the regulation of the use of radioactive materials in order to protect public health and safety. In particular, it requires the NRC to ensure that public health and safety are adequately protected from all hazards resulting from the operation of power reactors. These hazards include the radioactive wastes generated by these facilities; and we submit that Congress did not intend that the NRC in effect authorize the generation of these highly toxic wastes without regard to whether they could be disposed of safely. To the contrary, the AEA requires that the NRC make a positive, definitive finding that radioactive wastes can be safely disposed of prior to the licensing of power reactors.

The congressional concern for the protection of public health and safety is interwoven throughout the fabric of the AEA. First it is repeatedly emphasized in the Act's statement of findings and purposes. For example, in Section 2 of the AEA, Congress specifically found that the "processing and utilization" of nuclear materials "must be regulated. . . to protect the health and safety of the public," and that "regulation by the United States of the production and utilization of atomic energy and of the facilities used in connection therewith is necessary . . . to protect the health and safety of the public." 42 U.S.C. § 2012(d), (e).

In addition, numerous provisions in the Act mandate consideration of public health and safety in the exercise of regulatory responsibilities, as noted below.[22/] Most importantly,

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22/ See, e.g., 42 U.S.C. § 2014(v)(production facility defined in terms of impact on public health and safety); § 2014(cc) (utilization facility defined in terms of impact on public health and safety); § 2021(d)(licensing authority delegated to the states contingent upon protection of the public health and safety); § 2039 (reactor safeguard committee established to report on potential hazards of reactor safety); § 2051(a)(5) (research program shall be directed, inter alia, to protect the public health and safety); § 2073(e)(7) (licenses for special nuclear material issued pursuant to standards to protect public health and safety); § 2099 (licenses to handle source material issued only if they will not be inimical to public health and safety); § 2111 (nuclear by-product material exempt from licensing only if there will be no unreasonable risk to the public health and safety); § 2134(a) (medical therapy utilization facilities subject to regulation necessary to protect health and safety); § 2134(c) (licenses for utilization facilities used in medical research subject to regulations to protect public health and safety); § 2164 (international cooperation and disclosure of data on health and safety issues encouraged).

the Act imposes a broad duty on the NRC to ensure protection of the public health and safety through stringent and comprehensive controls imposed through the licensing of nuclear activities and, in particular, the licensing of nuclear reactors.

For example, Section 102(b) of the AEA directs the NRC to issue reactor licenses to only those persons who will observe "such safety standards to protect the public health and to minimize danger to life or property as the Commission may by rule establish." 42 U.S.C. § 2133(b). Section 103(d) precludes the issuance of a license for the production or utilization of nuclear materials if it "would be inimical to ... the health and safety of the public." 42 U.S.C. § 2133(d). Section 182 requires the Commission to make explicit findings in reactor licensing proceedings that the utilization and production of special nuclear material "will provide adequate protection to the health and safety of the public," and authorizes the Commission to obtain whatever information it deems necessary to make such a finding. 42 U.S.C. § 2232(a).

Finally, in creating the NRC in Section 1 of the ERA, Congress specifically declared its intention "to advance the goals of restoring, protecting and enhancing environmental quality, and to assure public health and safety." 42 U.S.C. § 5801. Indeed, the enactment of the ERA confirmed Congress' concern over the disposal of radioactive wastes. The Senate Report on the Act, for example, stated that the upgrading of the NRC's reactor safety review (primarily through additional

procedural safeguards) was essential "to keep pace with the growth of the nuclear power industry and of the quantities of potentially explosive radioactive materials it will generate in the fuel cycle." S. Rep. No. 93-980, 93rd Cong., 2d Sess. 23 (1974). The Report further recognized that "nuclear material safeguards, nuclear waste disposal, transportation," as well as reactor operations, are all major "areas related to the generic concept of nuclear safety." Id. at 56.

The provisions of the ERA, moreover, are suggestive of a congressional intent that the safety of waste disposal be addressed at the reactor licensing stage. For example, Section 307 of the ERA, 42 U.S.C. § 5877, requires the NRC to make an annual report to Congress, which will include a description of the NRC's activities "insuring the safe permanent disposal of high-level radioactive wastes through the licensing of nuclear activities and facilities." Section 203 of the ERA requires the safety assessment performed on reactors to go beyond the immediate reactor operations and consider "transporting and storing high-level radioactive wastes to prevent radiation hazards to employees and the general public." 42 U.S.C. § 5843 (b)(2)(B). Similarly, Section 204 requires the safety assessment to include not only a review of the facility actually licensed, but in addition "contingency plans for dealing with threats, thefts, and sabotage relating to ... high-level radioactive wastes." 42 U.S.C. § 5844(b).

Statutes like the AEA, designed to protect the public health and safety, must be construed broadly to achieve that

end. U.S. Pharmaceutical Corporation v. Richardson, 461 F.2d 223, 227-228 (4th Cir.), aff'd, 412 U.S. 655 (1972); United States v. International Longshoreman's Ass'n, AFL-CIO, 334 F. Supp. 1134, 1137 (S.D. Ga. 1971). In the present context, the Supreme Court has underscored the broad sweep of the NRC's responsibility to protect the public health and safety through reactor licensing under the AEA.

In Power Reactor Development Co. v. International Union, 367 U.S. 396, 414 (1961), the Court noted that Congress, in promulgating the AEA, "had the problem of safety uppermost in mind." In construing the statute, the Court found (1) that licenses "can be issued only consistently with the health and safety of the public," (2) that "the responsibility for safeguarding the health and safety belongs under the statute to the Commission," and (3) that the Commission "shall by regulation set forth what the public safety requires as a prerequisite to the issuance of any license or permit under the Act." Id. at 404.

The Court then accepted the Commission's argument that a permit for construction of a power reactor could be issued without a final determination of the safety of the project based only on a reasonable assurance at that time that a research and development program would resolve any unanswered safety questions prior to the issuance of an operating license. However, the Court was able to reconcile this result with the public safety mandate of the statute only by reason of its further conclusion that a "positive" and "definitive safety

finding" was required in the proceeding to consider the application for an operating license. Id. at 406-407.[23/]

In Power Reactor, the Court stressed the absolute character of this latter determination by noting that the Commission could not consider the enormous investment made by the applicant in constructing the plant when making the "definitive safety finding." Id. at 415. In this way, the broad safety mandate of the AEA was upheld: the full scope of the safety determination was preserved, and it was required prior to the issuance of a reactor operating license.

In contrast, the NRC's decision reviewed herein would completely exempt from the reactor licensing safety determination any consideration of what may be the single greatest threat to public health and safety from the licensing of a reactor: the ultimate fate of the radioactive wastes generated by that reactor. Determination of the adequacy of waste disposal would be deferred beyond the reactor licensing stage to some indefinite time when application is made to the NRC for a license for a waste disposal facility.

This approach is patently inconsistent with that adopted by the Supreme Court in Power Reactor. The Supreme Court's decision contemplated that reactors would not be

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23/ Similarly, cases decided since Power Reactor have recognized the need for a full, explicit safety finding by the Commission prior to the issuance of reactor operating licenses. North Anna Environmental Coalition v. NRC, 533 F.2d 655, 659 (D.C.Cir. 1976); Citizens for Safe Power, Inc. v. NRC, 524 F.2d 1291, 1297-98 (D.C. Cir. 1975); Nader v. NRC, 513 F.2d 1045, 1052 (D.C.Cir. 1975).

licensed to operate until any peril to public health and safety which might accrue from that operation was definitively negated by the NRC. Here, the NRC's professed interpretation of the AEA would allow it to grant reactor licenses, even in the face of clear perils to public health and safety from the radioactive wastes generated. This approach thus abandons the "last clear chance" for preventive action which the court in Power Reactor found so important. It is fundamentally incompatible with the purpose of the AEA to ensure that the public health and safety will not be endangered by the development of the nuclear industry.

D. The NRC Decision Violates Principles Of Responsible Agency Decisionmaking Applied Under The National Environmental Policy Act By Its Limitation Of The Safety Review To Activities Which Occur At The Reactor Site And Its Refusal To Consider The Safety Of The Off-Site Permanent Storage Of The Radioactive Wastes Which Are The Inevitable Consequences Of Reactor Operations.

It has been firmly established under NEPA that an agency must consider the indirect or second order effects of the immediate projects proposed, and must abjure any limitation of perspective to the immediate boundaries or site of a project. Accordingly, in several cases the courts have held that the effects of the radioactive wastes or other consequences of potentially hazardous nuclear technologies be fully assessed before facilities employing these technologies are licensed by

the NRC.

Although these cases arose under NEPA, they are clearly relevant to the interpretation of the AEA. In Citizens for Safe Power, Inc. v. N.R.C., 524 F.2d 1291, 1299 (D.C.Cir. 1976), the court noted the interrelation of the two statutes:

> "The Atomic Energy Act was passed years before broader environmental concerns prompted enactment of the Environmental Protection Policy Act. Yet many of those same concerns permeated provisions of the first-mentioned legislation and the regulations promulgated in accordance with its mandate. To say that these must be regarded independently of the constantly increasing consciousness of environmental risks reflected in proceedings with reference to NEPA, would make for neither practicality nor sense. Nor can AEA requirements be viewed separate and apart from NEPA considerations."

In Vermont Yankee, described above, the court directed the NRC to consider the environmental impacts of radioactive waste disposal and reprocessing under NEPA, prior to the issuance of reactor operating licenses. The NRC claimed, as it does here, that permanent waste disposal was too speculative to be considered in power reactor licensing proceedings, and that it would be more appropriately considered in proceedings to license waste disposal facilities. The court summarily rejected these arguments. It stated that "[d]ecisions to license nuclear reactors which generate large amounts of toxic wastes requiring special isolation from the environment for several centuries are a paradigm of 'irreversible and

irretrievable commitments of resources.'" 547 F.2d at 641.

The court in Vermont Yankee held in effect that questions relating to permanent waste disposal are material issues in power reactor licensing proceedings. For the same reasons that the environmental effects of waste disposal must be considered in these proceedings pursuant to the requirements of NEPA, the safety of future waste disposal must be determined as part of the "definitive safety finding" required under the AEA and the Power Reactor case.

Similarly, in Scientists' Institute for Public Information v. A.E.C., 481 F.2d 1079 (D.C.Cir. 1973), the court recognized that the impacts of radioactive waste disposal must be assessed prior to the development of a nuclear technology which could exacerbate problems associated with the handling of these wastes. In holding that NEPA required the preparation of an environmental impact statement on the AEC's liquid metal fast breeder reactor program, the court recognized that the "environmental programs attendant upon processing, transporting, and storing these wastes ... warrant the most searching scrutiny under NEPA." 481 F.2d at 1098. The court therefore emphasized the need for advance assessment of the technology:

> "To wait until a technology attains the stage of complete commercial feasibility before considering the possible adverse environmental effects attendant upon ultimate application of the technology will undoubtedly frustrate meaningful consideration and balancing of the environmental costs against economic and other benefits." 481 F.2d at 1089.

See also Calvert Cliffs' Coordinating Committee, Inc. v. A.E.C., 449 F.2d 1109, 1128 (D.C.Cir. 1971).

In a later case, Natural Resources Defense Council, Inc. v. NRC, 539 F.2d 824 (2d Cir. 1976), this Court also recognized the need for a full advance assessment of the environmental impacts of a new and hazardous nuclear technology prior to its licensing. There, this Court enjoined the licensing of commercial utilization of mixed oxide fuel in nuclear reactors and activities related thereto pending completion of a safeguards study. The Court noted that "[t]he fact that the environmental effects of ... a new technology will not emerge for years does not mean that the program does not effect the environment...." 539 F.2d at 841.

In a variety of other contexts, the courts have applied similar principles in construing NEPA's impact upon decisionmaking. For example, in Greene County Planning Board v. F.P.C., 455 F.2d 412 (2d Cir.), cert. denied, 409 U.S. 849 (1972), this Court found inadequate the Federal Power Commission's environmental assessment of the impacts of a proposed pump storage project, because the Commission had failed to consider the impacts of future power developments that the proposed project might facilitate. In City of Davis v. Coleman, 521 F.2d 661 (9th Cir. 1975), the court required a state highway agency to assess the growth-inducing effects of a proposed highway exchange, in view of the inextricable link between the road expansion and future development. See also Sierra Club v.

Coleman, 421 F. Supp. 63, 67 (D.D.C. 1976). Similarly, in Atchison, Topeka & Santa Fe Ry. v. Callaway, 382 F. Supp. 610 (D.D.C. 1974), the court enjoined construction of a dam until the Corps of Engineers assessed the long-term stress this construction would place on existing structures along the river. The court noted its responsibility to "guard against an agency's considering only the immediate impacts" of a program. 382 F. Supp. at 621.

The instant case involves a still more compelling need for consideration of the long range impacts of a proposed project than the cases discussed above. These cases required assessment of future developments and future impacts that might follow the initial project under consideration. In contrast, once a reactor has been licensed and begins to operate, it inevitably produces high-level radioactive wastes requiring permanent isolation from the biosphere. Petitioner submits that to cut short the assessment of this long-range problem thwarts the fundamental principles of comprehensive decisionmaking in the environmental field, as well as the principles of the AEA.

E. There Is No Warrant For The NRC's Conclusion That Congress Has Given Tacit Approval To The Agency's Practice Of Excluding Radioactive Waste Disposal From The Required Safety Determination In Reactor Licensing Proceedings.

The NRC's Decision herein attempts to carve out a

broad exception from its statutory responsibility to make a "definitive safety finding" in power reactor licensing proceedings. Ironically, the matter allegedly excepted -- the disposal of the radioactive wastes generated by these reactors -- may pose the potentially greatest peril to public health and safety. In other contexts, courts have concluded that exceptions to statutes concerned with public health and safety must be construed narrowly. See, e.g., U.S. v. Pharmaceutical Corp. v. Richardson, 461 F.2d 223, 227-228 (4th Cir. 1972). Petitioner submits that the NRC has adduced no substantial basis for an exception to the broad, unqualified mandate in the AEA to protect the public health and safety.

As a preliminary matter, we note that the NRC's interpretation of the AEA, standing alone, cannot justify the agency's past practice of excluding radioactive waste disposal from its definitive safety finding in the reactor licensing context. While administrative interpretations of statutes are entitled to some weight, the courts are the final arbiters of statutory construction. Zuber v. Allen, 396 U.S. 168, 192-193 (1969); Wilderness Society v. Morton, 479 F.2d 842, 965 (D.C. Cir.) cert. denied, 411 U.S. 917 (1973). As the court stated in Volkswagenwerk Aktiengesellschaft v. F.M.C., 390 U.S. 261, 272 (1968), "[t]he deference owed to an expert tribunal cannot be allowed to slip into judicial inertia...."

Indeed, an agency interpretation is least compelling where, as here, it involves a pure question of law and does not draw upon the agency's particular expertise. Skidmore v.

Swift & Co., 323 U.S. 134, 139 (1944); March v. United States, 506 F.2d 1306, 1316 (D.C.Cir. 1974); Thompson v. Clifford, 408 F.2d 154, 167 (D.C.Cir. 1968). Clearly, the NRC would be required to utilize its expertise in determining whether "reasonable assurance" exists that radioactive wastes can and will be disposed of safely. However, this Court is faced with the more preliminary matter of laying a procedural framework which will ensure that the agency's expertise, when exercised, will be disclosed to the public through express findings made available for public scrutiny and meaningful judicial review. Resolution of this procedural issue is singularly within the province of the courts.

In its decision herein, the NRC purports to find support for its lax interpretation of the safety mandate of the AEA in congressional silence concerning the agency's practice. The NRC argues that Congress impliedly ratified the agency's licensing of reactors without an express safety determination concerning radioactive waste disposal.

Petitioner submits, however, that any inference of legislative fiat based solely on congressional silence is particularly strained when, as here, it runs counter to the underlying purpose of the statute. In analyzing the meaning of a statute, courts must look first and foremost to the language and purpose of the law, especially when the legislative history is confusing and ambiguous. United States v. Oregon, 366 U.S. 643, 648 (1961); Calvert Cliffs' Coordinating

Committee, Inc. v. A.E.C., 449 F.2d 1109, 1126 (D.C.Cir. 1971); March v. United States, 506 F.2d 1306, 1314 (D.C.Cir. 1974).

Reliance upon tacit congressional approval is often "shaky business," as the Court noted in the Power Reactor case. 367 U.S. at 409. While the Court in Power Reactor did find justification in tacit legislative approval, for imposing a lesser safety standard in reactor construction permit proceedings than at the operating license stage, it did so after determining that this interpretation in no way undercut the basic safety mandate of the Act, as discussed supra at pages 37-39. In contrast, in the present case, protection of the public health and safety is the very matter at issue, and it turns decisively on whether the interpretation of the NRC or petitioner is accepted.

Finally, there is no evidence in the present case that anyone ever forcefully brought to Congress' attention, or put in issue before Congress, the matter presented by this appeal: the agency's failure to make an express safety determination concerning disposal of radioactive wastes in reactor licensing proceedings. In contrast, in Power Reactor the Court noted that the agency practice had "time and again been brought to the attention of the Joint Committee of Congress on Atomic Energy." 367 U.S. at 408. No such showing has been made in the instant case.

Acceptance of the NRC's argument would automatically validate every agency practice which Congress had not corrected

-- regardless of any conflict with the purpose of the statute. As this Court stated in F.W. Woolworth Co. v. United States, 91 F.2d 973, 976 (2d Cir. 1937):

> "[N]ot every [administrative] ruling is incorporated in the text because it is not reputiated. ... To suppose that Congress must particularly correct each mistaken construction under penalty of incorporting it into the fabric of the statute appears to us unwarranted...."

At a minimum, before congressional approval can be inferred, there must be a clear showing that Congress was actually familiar with agency practice and meant to incorporate it into the fabric of the statute. Morton v. Ruiz, 415 U.S. 199, 237 (1974); I.R.S. v. Glenshaw Glass Co., 348 U.S. 426, 431 (1954); Thompson v. Clifford, 408 F.2d 154, 164 (D.C.Cir. 1968). Such a showing is absent here, and accordingly legislative silence is not indicative of legislative intent.

As discussed above, the provisions of the AEA, and their interpretation by the Supreme Court in Power Reactor, leave no doubt that Congress had safety uppermost in mind and meant to protect the public health and safety through the express, definitive safety finding required in the licensing of nuclear activities, particularly nuclear reactors. The NRC's refusal to determine whether safe waste disposal is in fact reasonably assured prior to the licensing of reactor operations and the concomitant creation of radioactive wastes, seriously jeopardizes the public health and safety and frustrates the express

congressional mandate of the Act. In these circumstances, it surely behooves the NRC to produce more substantial evidence of congressional approval of the agency's interpretation than mere silence.

VI. CONCLUSION

By reason of the foregoing, petitioner respectfully submits that this Court should reverse the NRC's denial of the petition herein and should remand the matter, requiring the agency to conduct a rulemaking proceeding to determine whether radioactive wastes generated by commercial nuclear reactors can be and will be disposed of safely, prior to reactor licensing.

Respectfully submitted,

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ADDENDUM

Section 103 of the Atomic Energy Act of 1954, 42 U.S.C. § 2133, provides:

Commercial licenses--Conditions

(a) The Commission is authorized to issue to persons applying therefor to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import, or export under the terms of an agreement for cooperation arranged pursuant to section 2153 of this title, utilization or production facilities for industrial or commercial purposes. Such licenses shall be issued in accordance with the provisions of subchapter XV of this chapter and subject to such conditions as the Commission may by rule or regulation establish to effectuate the purposes and provisions of this chapter.

Nonexclusive basis

(b) The Commission shall issue such licenses on a nonexclusive basis to persons applying therefor (1) whose proposed activities will serve a useful purpose proportionate to the quantities of special nuclear material or source material to be utilized; (2) who are equipped tc observe and who agree to observe such safety standards to protect health and to minimize danger to life or property as the Commission may by rule establish; and (3) who agree to make available to the Commission such technical information and data concerning activities under such licenses as the Commission may determine

necessary to promote the common defense and security and to protect the health and safety of the public. All such information may be used by the Commission only for the purposes of the common defense and security and to protect the health and safety of the public.

License period

(c) Each such license shall be issued for a specified period, as determined by the Commission, depending on the type of activity to be licensed, but not exceeding forty years, and may be renewed upon the expiration of such period.

Limitations

(d) No license under this section may be given to any person for activities which are not under or within the jurisdiction of the United States, except for the export of production or utilization facilities under terms of an agreement for cooperation arranged pursuant to section 2153 of this title, or except under the provisions of section 2139 of this title. No license may be issued to an alien or any any [sic] corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation or a foreign government. In any event, no license may be issued to any person within the United States if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public.

10 C.F.R. § 50.57(a)(1970) provides:

Issuance of operating license.[1/]

(a) Pursuant to § 50.56, an operating license may be issued by the Commission, up to the full term authorized by § 50.51, upon finding that:

(1) Construction of the facility has been substantially completed, in conformity with the construction permit and the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and

(2) The facility will operate in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and

(3) There is reasonable assurance (i) that the activities authorized by the operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities can be conducted in compliance with the regulations in this chapter; and

(4) The applicant is technically and financially qualified to engage in the activities authorized by the

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[1/] The Commission may issue a provisional operating license pursuant to the regulations in this part in effect on March 30, 1970, for any facility for which a notice of hearing on an application for a provisional operating license or a notice of proposed issuance of a provisional operating license has been published on or before that date.

operating license in accordance with the regulations in this chapter; and

(5) The applicable provisions of Part 140 of this chapter have been satisfied; and

(6) The issuance of the license will not be inimical to the common defense and security or to the health and safety of the public.

IN THE UNITED STATES COURT OF APPEALS

FOR THE SECOND CIRCUIT

NATURAL RESOURCES DEFENSE COUNCIL, INC., Petitioner, v. UNITED STATES NUCLEAR REGULATORY COMMISSION and UNITED STATES OF AMERICA, Respondents.	)	No. 77-4157

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IN THE

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CERTIFICATE OF SERVICE

I hereby certify that true copies of:

1) Letter from Helene Linker to A. Daniel Fusaro, February 23, 1978

2) Corrected copy of Natural Resources Defense Council's opening and reply brief filed in the above-entitled action

3) A copy of Northern States Power Company (Prairie Island Nuclear Generating Plant, Units 1 and 2), Vermont Yankee Nuclear Power Corporation (Vermont Yankee Nuclear Power Station) ALAB-455 (January 27, 1978)

4) News Release, Nuclear Regulatory Commission, Vol. 3, No. 43 (week ending December 13, 1977)

were mailed this 23rd day of February, 1978, by first class mail from Palo Alto, California, to the following:

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